

Knoxville

MAR 04 2013

STATE OF TENNESSEE  
DEPARTMENT OF ENVIRONMENT AND CONSERVATION  
DIVISION OF AIR POLLUTION CONTROL



TN. DIV. OF  
AIR POLLUTION CONTROL

2013 FEB 15 PM 3:41

9th Floor, L & C Annex  
401 Church Street  
Nashville, TN 37243-1531  
Telephone: ( 615 ) 532-0554  
FAX: ( 615 ) 532-0614

NOT TO BE USED FOR TITLE V APPLICATIONS

# PERMIT APPLICATION

APC 20

PLEASE TYPE OR PRINT AND SUBMIT IN DUPLICATE FOR EACH EMISSION SOURCE. ATTACH APPROPRIATE SOURCE DESCRIPTION FORMS.

|  |             |                                    |                                      |                                      |
|--|-------------|------------------------------------|--------------------------------------|--------------------------------------|
| 1. ORGANIZATION'S LEGAL NAME<br>Roane Medical Center                               |             |                                    | /// FOR                              | APC COMPANY--POINT NO.<br>73-0237-01 |
| 2. MAILING ADDRESS (ST/RD/P.O. BOX)<br>8045 Roane Medical Center Drive             |             |                                    | /// APC                              | APC LOG/PERMIT NO.<br>966970         |
| CITY<br>Harriman   | STATE<br>TN | ZIP CODE<br>37748                  | PHONE WITH AREA CODE<br>865-882-4346 |                                      |
| 3. PRINCIPAL TECHNICAL CONTACT<br>Dejan Veljkovich                                 |             |                                    | PHONE WITH AREA CODE<br>865-882-4346 |                                      |
| 4. SITE ADDRESS (ST/RD/HWY)<br>8045 Roane Medical Center Drive                     |             |                                    | COUNTY NAME<br>Roane                 |                                      |
| CITY OR DISTANCE TO NEAREST TOWN<br>Harriman                                       |             | ZIP CODE<br>37748                  | PHONE WITH AREA CODE<br>865-882-4346 |                                      |
| 5. EMISSION SOURCE NO. (NUMBER WHICH UNIQUELY IDENTIFIES THIS SOURCE)<br>041245168 |             | PERMIT RENEWAL<br>YES ( ) NO ( X ) |                                      |                                      |
| 6. BRIEF DESCRIPTION OF EMISSION SOURCE<br>High Pressure Steam Boiler              |             |                                    |                                      |                                      |

|                             |                                       |                             |                              |   |
|-----------------------------|---------------------------------------|-----------------------------|------------------------------|---|
| 7. TYPE OF PERMIT REQUESTED |                                       |                             |                              |   |
| CONSTRUCTION<br>( )         | STARTING DATE<br>8-8-2011             | COMPLETION DATE<br>11-30-12 | LAST PERMIT NUMBER<br>700677 | EMISSION SOURCE REFERENCE NUMBER<br>041245168 |
| OPERATING<br>( X )          | DATE CONSTRUCTION STARTED<br>8-8-2011 | DATE COMPLETED<br>11-30-12  | LAST PERMIT NUMBER<br>700677 | EMISSION SOURCE REFERENCE NUMBER              |
| LOCATION TRANSFER<br>( )    | TRANSFER DATE                         |                             | LAST PERMIT NUMBER           | EMISSION SOURCE REFERENCE NUMBER              |

ADDRESS OF LAST LOCATION  
8045 Roane Medical Center Drive, Harriman, Tn 37748

|  |
|--|
| 8. DESCRIBE CHANGES THAT HAVE BEEN MADE TO THIS EQUIPMENT OR OPERATION SINCE THE LAST CONSTRUCTION OR OPERATING PERMIT APPLICATION.<br>N/A |
|--|

|   |                              |   |
|---|------------------------------|---|
| 9. SIGNATURE (APPLICATION MUST BE SIGNED BEFORE IT WILL BE PROCESSED) |                              | DATE  |
| 10. SIGNER'S NAME (TYPE OR PRINT)<br>Dejan Veljkovich                 | TITLE<br>Facilities Director | PHONE WITH AREA CODE<br>865-882-4346 / 865-970-1279 |



NOT TO BE USED FOR TITLE V APPLICATIONS

# PERMIT APPLICATION

APC 20

PLEASE TYPE OR PRINT AND SUBMIT IN DUPLICATE FOR EACH EMISSION SOURCE. ATTACH APPROPRIATE SOURCE DESCRIPTION FORMS.

|  |             |                                    |   |
|--|-------------|------------------------------------|---|
| 1. ORGANIZATION'S LEGAL NAME<br>Roane Medical Center                               |             | /// FOR                            | APC COMPANY--POINT NO.<br><b>73-0237-01</b> |
| 2. MAILING ADDRESS (ST/RD/P.O. BOX)<br>8045 Roane Medical Center Drive             |             | /// APC                            | APC LOG/PERMIT NO.<br><b>966970</b>         |
| CITY<br>Harriman   | STATE<br>TN | ZIP CODE<br>37748                  | PHONE WITH AREA CODE<br>865-882-4346        |
| 3. PRINCIPAL TECHNICAL CONTACT<br>Dejan Veljkovich                                 |             |                                    | PHONE WITH AREA CODE<br>865-882-4346        |
| 4. SITE ADDRESS (ST/RD/HWY)<br>8045 Roane Medical Center Drive                     |             |                                    | COUNTY NAME<br>Roane                        |
| CITY OR DISTANCE TO NEAREST TOWN<br>Harriman                                       |             | ZIP CODE<br>37748                  | PHONE WITH AREA CODE<br>865-882-4346        |
| 5. EMISSION SOURCE NO. (NUMBER WHICH UNIQUELY IDENTIFIES THIS SOURCE)<br>041245195 |             | PERMIT RENEWAL<br>YES ( ) NO ( X ) |   |

6. BRIEF DESCRIPTION OF EMISSION SOURCE  
High Pressure Steam Boiler

RECEIVED  
 2013 FEB 15 PM 3:43  
 TN. DIV. OF  
 AIR POLLUTION CONTROL

| 7. TYPE OF PERMIT REQUESTED |                                       |                             |                              |   |
|-----------------------------|---------------------------------------|-----------------------------|------------------------------|---|
| CONSTRUCTION<br>( )         | STARTING DATE<br>88-2011              | COMPLETION DATE<br>11-30-12 | LAST PERMIT NUMBER<br>700676 | EMISSION SOURCE REFERENCE NUMBER<br>041245195 |
| OPERATING<br>( X )          | DATE CONSTRUCTION STARTED<br>8-8-2011 | DATE COMPLETED<br>11-30-12  | LAST PERMIT NUMBER<br>700676 | EMISSION SOURCE REFERENCE NUMBER              |
| LOCATION TRANSFER<br>( )    | TRANSFER DATE                         |                             | LAST PERMIT NUMBER           | EMISSION SOURCE REFERENCE NUMBER              |

ADDRESS OF LAST LOCATION  
8045 Roane Medical Center Drive, Harriman, Tn 37748

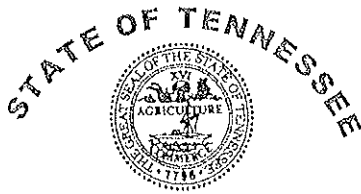
8. DESCRIBE CHANGES THAT HAVE BEEN MADE TO THIS EQUIPMENT OR OPERATION SINCE THE LAST CONSTRUCTION OR OPERATING PERMIT APPLICATION.

N/A

|   |                              |                                      |
|---|------------------------------|--------------------------------------|
| 9. SIGNATURE (APPLICATION MUST BE SIGNED BEFORE IT WILL BE PROCESSED) |                              | DATE                                 |
| 10. SIGNER'S NAME (TYPE OR PRINT)<br>Dejan Veljkovich                 | TITLE<br>Facilities Director | PHONE WITH AREA CODE<br>865-882-4346 |

# CERTIFICATE OF BOILER INSPECTION

Re-Inspection Date \_\_\_\_\_  
Inspector (Initial) \_\_\_\_\_  
\_\_\_\_\_  
\_\_\_\_\_



Certif #: 700677  
Date: 11/30/2012

DEPARTMENT OF LABOR & WFD  
DIVISION OF  
BOILER AND ELEVATOR INSPECTION

## Owner

ROANE MEDICAL CENTER  
2250 ROANE STATE HWY.  
HARRIMAN, TN 37748

## Location

ROANE MEDICAL CENTER  
2250 ROANE STATE HWY.  
HARRIMAN, TN 37748

Boiler Number: T87851  
NB Number: 18065  
Date Inspected: 10/24/2012  
Expiration Date: 10/24/2013  
Inspected by: PETERS, DANNY  
Location in Plant: BLR RM

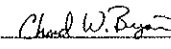
Pressure Allowed: 125  
Safety Valve Setting: 125  
Manufacturer: HURST  
Year Built: 2012  
Insured by: STATE

THIS IS TO CERTIFY THAT THE HEREIN DESCRIBED BOILER OR PRESSURE VESSEL MAY BE OPERATED AT THE LOCATION AND UNDER THE CONDITIONS LISTED ABOVE.  
THIS BOILER OR PRESSURE VESSEL MAY NOT BE OPERATED LEGALLY UNLESS THIS CERTIFICATE IS POSTED UNDER GLASS IN A CONSPICUOUS PLACE NEAR THE BOILER OR VESSEL.

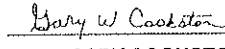
COMMISSIONER

  
KARLA DAVIS

CHIEF BOILER INSPECTOR

  
CHAD W. BRYAN

ASST. ADMINISTRATOR

  
GARY COOKSTON

## BOILER INSPECTION CERTIFICATE

STATE OF TENNESSEE  
Boilers Division  
220 French Landing Drive  
2nd Floor  
Nashville, TN 37243  
Phone :615-741-2123 FAX :615-532-1469

ROANE MEDICAL CENTER  
2250 ROANE STATE HWY.  
HARRIMAN, TN 37748

# CERTIFICATE OF BOILER INSPECTION

Re-Inspection  
Date

Inspector  
(Initial)



Certif #: 700676

Date: 11/30/2012

DEPARTMENT OF LABOR & WFD  
DIVISION OF  
BOILER AND ELEVATOR INSPECTION

Owner

Location

ROANE MEDICAL CENTER  
2250 ROANE STATE HWY.  
HARRIMAN, TN 37748

ROANE MEDICAL CENTER  
2250 ROANE STATE HWY.  
HARRIMAN, TN 37748

Boiler Number: T87850

NB Number: 18066

Date Inspected: 10/24/2012

Expiration Date: 10/24/2013

Inspected by: PETERS, DANNY

Location in Plant: BLR RM

Pressure Allowed: 125

Safety Valve Setting: 125

Manufacturer: HURST

Year Built: 2012

Insured by: STATE

THIS IS TO CERTIFY THAT THE HEREIN DESCRIBED BOILER OR PRESSURE VESSEL MAY BE  
OPERATED AT THE LOCATION AND UNDER THE CONDITIONS LISTED ABOVE.  
THIS BOILER OR PRESSURE VESSEL MAY NOT BE OPERATED LEGALLY UNLESS THIS CERTIFICATE  
IS POSTED UNDER GLASS IN A CONSPICUOUS PLACE NEAR THE BOILER OR VESSEL.

COMMISSIONER

KARLA DAVIS

CHIEF BOILER INSPECTOR

CHAD W. BRYAN

ASST. ADMINISTRATOR

GARY COOKSTON

## BOILER INSPECTION CERTIFICATE

STATE OF TENNESSEE

Boilers Division

220 French Landing Drive

2nd Floor

Nashville, TN 37243

Phone :615-741-2123 FAX :615-532-1469

ROANE MEDICAL CENTER  
2250 ROANE STATE HWY.  
HARRIMAN, TN 37748



NOT TO BE USED FOR TITLE V APPLICATIONS

PROCESS OR FUEL BURNING  
SOURCE DESCRIPTION

APC21(& 24)

PLEASE TYPE OR PRINT, SUBMIT IN DUPLICATE AND ATTACH TO THE PERMIT APPLICATION.

|  |                        |                                |   |                                |
|--|------------------------|--------------------------------|---|--------------------------------|
| 1. ORGANIZATION NAME<br><b>ROANE MEDICAL CENTER</b>  |                        |                                | ///<br>FOR                                      | APC COMPANY-POINT NO.          |
| 2. EMISSION SOURCE NO. (AS ON PERMIT APPLICATION)  |                        | SIC CODE                       | ///<br>APC                                      | APC PERMIT/LOG NO.             |
| 3. DESCRIPTION OF PROCESS OR FUEL BURNING UNIT<br><b>ROANE MEDICAL CENTER WILL OPERATE TWO HIGH PRESSURE STEAM BOILERS TO PRODUCE DOMESTIC HOT WATER, HEATING WATER, STERIL PROCESSING AND HUMIDIFICATION FOR THE NEW HOSPITAL.</b>                              |                        |                                |   |                                |
| 4. NORMAL OPERATION:<br>→  | HOURS/DAY<br><b>24</b> | DAYS/WEEK<br><b>7</b>          | WEEKS/YEAR<br><b>52</b>                         | DAYS/YEAR<br><b>365</b>        |
| 5. PERCENT ANNUAL THROUGHPUT: →  | DEC.-FEB.<br><b>30</b> | MARCH-MAY<br><b>24</b>         | JUNE-AUG.<br><b>22</b>                          | SEPT.-NOV.<br><b>24</b>        |
| 6. TYPE OF PERMIT APPLICATION  |                        |                                |   | (CHECK BELOW ONE ONLY)         |
| PROCESS SOURCE: APPLY FOR A SEPARATE PERMIT FOR EACH SOURCE. (CHECK AT RIGHT, AND COMPLETE LINES 7, 8, 13, AND 14).  |                        |                                |   | ( )                            |
| PROCESS SOURCE WITH IN-PROCESS FUEL: PRODUCTS OF COMBUSTION CONTACT MATERIALS HEATED. APPLY FOR A SEPARATE PERMIT FOR EACH SOURCE. (CHECK AT RIGHT, AND COMPLETE LINES 7, 8, AND 10 THROUGH 14)  |                        |                                |   | ( )                            |
| NON-PROCESS FUEL BURNING SOURCE: PRODUCTS OF COMBUSTION DO NOT CONTACT MATERIALS HEATED. COMPLETE THIS FORM FOR EACH BOILER OR FUEL BURNER AND COMPLETE AN EMISSION POINT DESCRIPTION FORM (APC 22) FOR EACH STACK. (CHECK AT RIGHT, AND COMPLETE LINES 9 TO 14) |                        |                                |   | ( X )                          |
| 7. TYPE OF OPERATION: CONTINUOUS, <input checked="" type="checkbox"/>  |                        | BATCH <input type="checkbox"/> | NORMAL BATCH TIME                               | NORMAL BATCHES/DAY             |
| 8. PROCESS MATERIAL INPUTS AND IN-PROCESS SOLID FUELS  |                        | DIAGRAM* REFERENCE             | INPUT RATES (POUNDS/HOUR)<br>DESIGN      ACTUAL | (FOR APC USE ONLY)<br>SCC CODE |
| A.   |                        |                                |   | /                              |
| B.   |                        |                                |   | /                              |
| C.   |                        |                                |   | /                              |
| D.   |                        |                                |   | /                              |
| E.   |                        |                                |   | /                              |
| F.   |                        |                                |   | /                              |
| G.   |                        |                                |   | /                              |
| TOTALS   |                        |                                |   | /                              |

\* A SIMPLE PROCESS FLOW DIAGRAM MUST BE ATTACHED.

( OVER )



|  |                |                   |  |   |  |
|--|----------------|-------------------|--|---|--|
| 9. BOILER OR BURNER DATA: ( COMPLETE LINES 9 TO 14 USING A SEPARATE FORM FOR EACH BOILER ) |                |                   |  |   |  |
| BOILER NUMBER  | STACK NUMBER** | TYPE OF FIRING*** | RATED BOILER HORSEPOWER                                | RATED INPUT CAPACITY (10 <sup>6</sup> BTU/HR) | OTHER BOILER RATING (SPECIFY CAPACITY AND UNITS) |
| B-1  | S-1            | AUTOMATIC         | 500  | 21.0  |  |
| BOILER SERIAL NO.  |                | DATE CONSTRUCTED  | DATE OF LAST MODIFICATION (EXPLAIN IN COMMENTS BELOW). |   |  |
| 041245195  |                | 2012              | NA   |   |  |

\*\* BOILERS WITH A COMMON STACK WILL HAVE THE SAME STACK NUMBER.

\*\*\* CYCLONE, SPREADER ( WITH OR WITHOUT REINJECTION ), PULVERIZED ( WET OR DRY BOTTOM, WITH OR WITHOUT REINJECTION ), OTHER STOKER ( SPECIFY TYPE ), HAND FIRED, AUTOMATIC, OR OTHER TYPE ( DESCRIBE BELOW IN COMMENTS ).

| 10. FUEL DATA: ( COMPLETE FOR A PROCESS SOURCE WITH IN-PROCESS FUEL OR A NON-PROCESS FUEL BURNING SOURCE ) |                      |              |                                  |          |       |                   |                         |
|--|----------------------|--------------|----------------------------------|----------|-------|-------------------|-------------------------|
| PRIMARY FUEL TYPE ( SPECIFY )  |                      |              | STANDBY FUEL TYPE(S) ( SPECIFY ) |          |       |                   |                         |
| FUELS USED   | ANNUAL USAGE         | HOURLY USAGE |                                  | % SULFUR | % ASH | BTU VALUE OF FUEL | (FOR APC ONLY) SCC CODE |
|  |                      | DESIGN       | AVERAGE                          |          |       |                   |                         |
| NATURAL GAS:   | 10 <sup>6</sup> CUFT | CUFT         | CUFT                             | ///      | ///   | 1,000             |                         |
|  | 40.637               | 21,500       | 4600                             | ///      | ///   |                   |                         |
| #2 FUEL OIL:   | 10 <sup>3</sup> GAL  | GAL          | GAL                              |          | ///   | 140,000           |                         |
|  | Negligible           | 120          |                                  |          | ///   | btu/gal           |                         |
| #5 FUEL OIL:   | 10 <sup>3</sup> GAL  | GAL          | GAL                              |          | ///   |                   |                         |
| #6 FUEL OIL:   | 10 <sup>3</sup> GAL  | GAL          | GAL                              |          | ///   |                   |                         |
| COAL:  | TONS                 | LBS          | LBS                              |          | ///   |                   |                         |
| WOOD:  | TONS                 | LBS          | LBS                              | ///      | ///   |                   |                         |
| LIQUID PROPANE:  | 10 <sup>3</sup> GAL  | GAL          | GAL                              | ///      | ///   | 85,000            |                         |
| OTHER (SPECIFY TYPE & UNITS.):   |                      |              |                                  |          |       |                   |                         |

11. IF WOOD IS USED AS A FUEL, SPECIFY TYPES AND ESTIMATE PERCENT BY WEIGHT OF BARK

NA

12. IF WOOD IS USED WITH OTHER FUELS, SPECIFY PERCENT BY WEIGHT OF WOOD CHARGED TO THE BURNER.

NA

13. COMMENTS

BOILERS ARE IN A PARALLEL ARRANGEMENT AND ANNUAL FUEL CONSUMPTION WILL BE DIVIDED BETWEEN THE TWO.  
BURNERS ARE COMBINATION GAS/OIL.

14. SIGNATURE

DATE

11-20-2012

## 9. BOILER OR BURNER DATA: ( COMPLETE LINES 9 TO 14 USING A SEPARATE FORM FOR EACH BOILER )

| BOILER NUMBER                  | STACK NUMBER** | TYPE OF FIRING***        | RATED BOILER HORSEPOWER                                      | RATED INPUT CAPACITY (10 <sup>6</sup> BTU/HR) | OTHER BOILER RATING (SPECIFY CAPACITY AND UNITS) |
|--------------------------------|----------------|--------------------------|--|---|--|
| B-2                            | S-2            | AUTOMATIC                | 500  | 21.0  |  |
| BOILER SERIAL NO.<br>041245168 |                | DATE CONSTRUCTED<br>2012 | DATE OF LAST MODIFICATION (EXPLAIN IN COMMENTS BELOW).<br>NA |   |  |

\*\* BOILERS WITH A COMMON STACK WILL HAVE THE SAME STACK NUMBER.

\*\*\* CYCLONE, SPREADER ( WITH OR WITHOUT REINJECTION ), PULVERIZED ( WET OR DRY BOTTOM, WITH OR WITHOUT REINJECTION ), OTHER STOKER ( SPECIFY TYPE ), HAND FIRED, AUTOMATIC, OR OTHER TYPE ( DESCRIBE BELOW IN COMMENTS ).

## 10. FUEL DATA: ( COMPLETE FOR A PROCESS SOURCE WITH IN-PROCESS FUEL OR A NON-PROCESS FUEL BURNING SOURCE )

| PRIMARY FUEL TYPE ( SPECIFY ) |                                   |                |              | STANDBY FUEL TYPE( S ) ( SPECIFY ) |            |                     |                         |
|-------------------------------|-----------------------------------|----------------|--------------|------------------------------------|------------|---------------------|-------------------------|
| FUELS USED                    | ANNUAL USAGE                      | HOURLY USAGE   |              | % SULFUR                           | % ASH      | BTU VALUE OF FUEL   | (FOR APC ONLY) SCC CODE |
|                               |                                   | DESIGN         | AVERAGE      |                                    |            |                     |                         |
| NATURAL GAS:                  | 10 <sup>6</sup> CUFT<br>40.637    | CUFT<br>21,500 | CUFT<br>4600 | /// /<br>/// /                     | ///<br>/// | 1,000               |                         |
| #2 FUEL OIL:                  | 10 <sup>3</sup> GAL<br>Negligible | GAL<br>120     | GAL          |                                    | ///<br>/// | 140,000<br>btu/gal. |                         |
| #5 FUEL OIL:                  | 10 <sup>3</sup> GAL               | GAL            | GAL          |                                    | ///<br>/// |                     |                         |
| #6 FUEL OIL:                  | 10 <sup>3</sup> GAL               | GAL            | GAL          |                                    | ///<br>/// |                     |                         |
| COAL:                         | TONS                              | LBS            | LBS          |                                    |            |                     |                         |
| WOOD:                         | TONS                              | LBS            | LBS          | /// /<br>/// /                     | ///<br>/// |                     |                         |
| LIQUID PROPANE:               | 10 <sup>3</sup> GAL               | GAL            | GAL          | /// /<br>/// /                     | ///<br>/// | 85,000              |                         |
| OTHER (SPECIFY TYPE & UNITS): |                                   |                |              |                                    |            |                     |                         |

## 11. IF WOOD IS USED AS A FUEL, SPECIFY TYPES AND ESTIMATE PERCENT BY WEIGHT OF BARK

NA

## 12. IF WOOD IS USED WITH OTHER FUELS, SPECIFY PERCENT BY WEIGHT OF WOOD CHARGED TO THE BURNER.

NA

## 13. COMMENTS

BOILERS ARE IN A PARALLEL ARRANGEMENT AND ANNUAL FUEL CONSUMPTION WILL BE DIVIDED BETWEEN THE TWO.  
BURNERS ARE COMBINATION GAS/OIL.

## 14. SIGNATURE

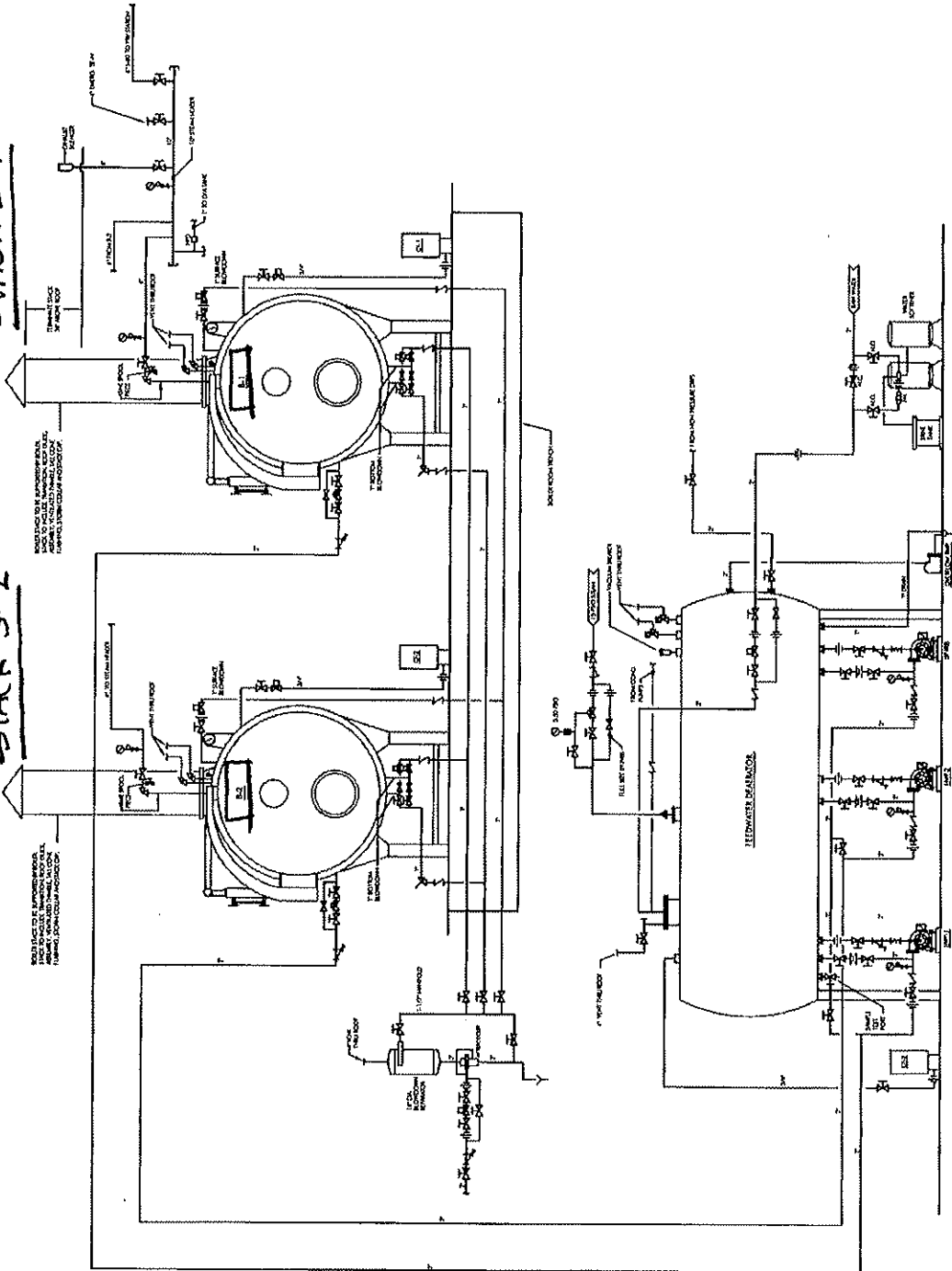


## DATE

11-20-2012

STACK S-1

STACK S-2



1 BOILER PIPING SCHEMATIC

LC Thompson Associates, Inc.  
1333 Columbia St., Suite 200  
Portland, ME 04102  
Phone: 603-761-1111  
Fax: 603-761-1112

Roane Medical Center - Hospital  
Covenant Health  
Mechanic, Vermont

THE LEWIS GROUP  
ARCHITECTS  
1000 Main Street  
Portland, ME 04102  
Phone: 603-761-1111  
Fax: 603-761-1112

| NO. | REVISION           | DATE       |
|-----|--------------------|------------|
| 1   | ISSUED FOR PERMIT  | 08/04/2011 |
| 2   | REVISED FOR PERMIT | 08/04/2011 |
| 3   | REVISED FOR PERMIT | 08/04/2011 |
| 4   | REVISED FOR PERMIT | 08/04/2011 |
| 5   | REVISED FOR PERMIT | 08/04/2011 |
| 6   | REVISED FOR PERMIT | 08/04/2011 |
| 7   | REVISED FOR PERMIT | 08/04/2011 |
| 8   | REVISED FOR PERMIT | 08/04/2011 |
| 9   | REVISED FOR PERMIT | 08/04/2011 |
| 10  | REVISED FOR PERMIT | 08/04/2011 |

|                |              |
|----------------|--------------|
| Project Number | 11008        |
| Sheet Number   | ME-001       |
| Scale          | 1/4" = 1'-0" |
| Drawn By       | ML           |
| Checked By     | ML           |
| Approved By    | ML           |